In the Claims

1. (Previously presented) An apparatus for holding an optical assembly in an imaging device which has a number of optical assemblies, wherein the optical assembly is suspended via at least one decoupling element in at least one area in a supporting structure, wherein the resultant effect of the at least one decoupling element in the at least one area is to impede possible movement in terms of rotation or translation in at least one suitable one of three orthogonal spatial directions, thus resulting in at least one statically defined bearing.

2. (Previously presented) The apparatus as claimed in claim 1, wherein said optical assembly is suspended via said decoupling elements in at least two different areas in said supporting structure, wherein the resultant effect of said decoupling elements in each area is stiff in terms of rotation or translation in at least one suitable one of three orthogonal spatial directions, thus resulting in at least one statically defined bearing.

3. (Previously presented) The apparatus as claimed in claim 2, wherein said imaging device is an objective in the form of a catadioptric objective for a projection exposure system for microlithography.

4. (Previously presented) The apparatus as claimed in claim 3, wherein said optical assemblies are a lens group.

5. (Previously presented) The apparatus as claimed in claim 2 or 3, wherein said decoupling elements in the one area in which the load is passed to said supporting structure is stiff in the spatial direction at least approximately parallel to the force of gravity (g), wherein said optical assembly is suspended in the other area in said supporting structure via a combination of tangentially stiff decoupling elements and a membrane.

6. (Previously presented) The apparatus as claimed in claim 2, wherein the tangentially stiff decoupling elements and the membrane are connected via a stiff intermediate element.

7. (Previously presented) The apparatus as claimed in claim 1 or 2, wherein said decoupling elements are in the form of leaf spring elements.

8. (Previously presented) The apparatus as claimed in claim 2, wherein said decoupling elements are stiff in the spatial direction at least approximately parallel to the force of gravity (g) in the one area in which the load is transmitted to said supporting structure, wherein the suspension of said optical assembly in said supporting structure in the other area is provided via a large number of tangentially stiff, axially and radially soft elements.

9. (Previously presented) The apparatus as claimed in claim 7 or 8, wherein the position of the areas, the alignment of said leaf spring elements and the spring stiffness of said leaf spring elements are chosen such that a first natural form of the oscillation rotates about a point (P3) on said assembly which is neutral with respect to optical sensitivity.

10. (Previously presented) The apparatus as claimed in one of claims 1 or 2, wherein said decoupling elements are chosen such that thermal expansions between said supporting structure and said assembly do not lead to mechanical forces.

11. (Previously presented) Use of an apparatus as claimed in claim 1 in a projection exposure system for microlithography.